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LETTERS

ARTICLES

PHYSICAL CHEMISTRY OF MATERIALS: FROM NANOPARTICLES TO MACROMOLECULES

PHYSICAL CHEMISTRY OF SURFACES AND INTERFACES

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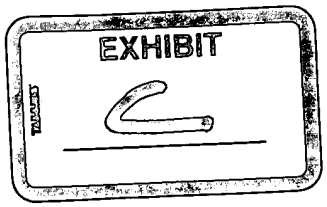
LETTERS

ARTICLES

PHYSICAL CHEMISTRY OF MATERIALS: FROM NANOPARTICLES TO MACROMOLECULES



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> T S6/3,AB/ALL
>
> 6/3,AB/1 (Item 1 from file: 2)
> DIALOG(R)File 2:INSPEC
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>
> 5757760 INSPEC Abstract Number: A9801-6146-009
> Title: Purification and size-selection of carbon nanotubes
> Author(s): Bonard, J.-M.; Stora, T.; Salvetat, J.-P.; Maier, F.;
> Stoeckli, T.; Duschl, C.; Forro, L.; de Heer, W.A.; Chatelain, A.
> Author Affiliation: Inst. de Phys. Exp., Ecole Polytech. Federale de
> Lausanne, Switzerland
> Journal: Advanced Materials vol.9, no.10 p.827-31
> Publisher: VCH Verlagsgesellschaft,
> Publication Date: 8 Aug. 1997 Country of Publication: Germany
> CODEN: ADVMEW ISSN: 0935-9648
> SICI: 0935-9648(19970808)9:10L.827:PSSC;1-P
> Material Identity Number: M606-97013
> Language: English
> Abstract: A non-destructive method for purifying carbon nanotubes
> produced by arc discharge is described. The nanotubes, in the form of a
> kinetically stable colloidal dispersion in a water-surfactant solution, are
> separated from the nanoparticles by filtration. The Figure shows the
> purified nanotubes after two filtration steps. Through controlled
> flocculation, nanotube size selection is also possible.
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> 6/3,AB/2 (Item 2 from file: 2)
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>
> 5735233 INSPEC Abstract Number: A9723-6146-033
> Title: EELS investigation of plasmon excitations in aluminum nanospheres
> and carbon nanotubes
> Author(s): Stoeckli, T.; Bonard, J.-M.; Stadelmann, P.-A.; Chatelain, A.
> Author Affiliation: Dept. de Phys., Ecole Polytech. Federale de Lausanne,
> Switzerland
> Journal: Zeitschrift fur Physik D (Atoms, Molecules and Clusters)
> Conference Title: Z. Phys. D, At. Mol. Clusters (Germany) vol.40, no.1-4
> p.425-8
> Publisher: Springer-Verlag,
> Publication Date: May 1997 Country of Publication: Germany
> CODEN: ZDACE2 ISSN: 0178-7683
> SICI: 0178-7683(199705)40:1/4L.425:EIPE;1-6
> Material Identity Number: J685-97009
> Conference Title: Eighth International Symposium on Small Particles and
> Inorganic Clusters
> Conference Sponsor: Augustinus Fonden; Carlsbergfondet; Danish Center for

> Nanostructures; Danfysk; et al
> Conference Date: 1-6 July 1996 Conference Location: Copenhagen,
> Denmark
> Language: English
> Abstract: High resolution transmission electron microscopy and electron
> energy loss spectroscopy are used to investigate plasmon losses of aluminum
> nanospheres and carbon nanotubes with high spatial resolution. We observe
> that some features of the spectra depend on the size of the particles. The
> suitability of a dielectric theory model to interpret the spectra is tested
> in the case of Al spheres. The model permits the identification of the
> observed peaks and reproduces the size dependent features. A similar model
> is applied to calculate excitation probabilities for carbon nanotubes.
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> DIALOG(R)File 2:INSPEC
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>
> 5735231 INSPEC Abstract Number: A9723-6146-031
> Title: Carbon nanotubes films: electronic properties and their application
> as field emitters
> Author(s): de Heer, W.A.; Bonard, J.M.; Stoeckli, T.; Chatelain, A.;
> Forro, L.; Ugarte, D.
> Author Affiliation: Dept. de Phys., Ecole Polytech. Federale de Lausanne,
> Switzerland
> Journal: Zeitschrift fur Physik D (Atoms, Molecules and Clusters) >
> Conference Title: Z. Phys. D, At. Mol. Clusters (Germany) vol.40, no.1-4
> p.418-20
> Publisher: Springer-Verlag,
> Publication Date: May 1997 Country of Publication: Germany
> CODEN: ZDACE2 ISSN: 0178-7683
> SICI: 0178-7683(199705)40:1/4L.418:CNFE;1-T
> Material Identity Number: J685-97009
> Conference Title: Eighth International Symposium on Small Particles and
> Inorganic Clusters
> Conference Sponsor: Augustinus Fonden; Carlsbergfondet; Danish Center for
> Nanostructures; Danfysk; et al
> Conference Date: 1-6 July 1996 Conference Location: Copenhagen,
> Denmark
> Language: English
> Abstract: Aligned carbon nanotube films have been studied with a wide
> variety of characterization techniques. Although nanotubes resemble bulk
> graphite as far as carrier densities, susceptibilities and conductivities
> are concerned, transport properties and ESR measurements indicate that
> carrier localization occurs at low temperatures. Nanotube films are good
> field emitters producing large currents at relatively low electric fields.
> The performance is superior to the intensely studied CVD diamond films in
> particular for the threshold field for electron emission. We believe that
> the observed remarkable electron emission is related to the special

> electronic structure of the nanotube tips.
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>
> 126218996 CA: 126(16)218996w JOURNAL
> Electron field emitters based on carbon nanotube films
> AUTHOR(S): De Heer, Walt A.; Bonard, Jean Marc; Fauth, Kai; Chatelain,
> Andre; Forro, Laszlo; Ugarte, Daniel
> LOCATION: School Physics, Georgia Institute Technology, Atlanta, GA,
> 30332, USA
> JOURNAL: Adv. Mater. (Weinheim, Ger.) DATE: 1997 VOLUME: 9 NUMBER: 1
> PAGES: 87-89 CODEN: ADVMEW ISSN: 0935-9648 LANGUAGE: English
> PUBLISHER: VCH
> ?
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